

and that the gel closely adheres to those optical fibers. The specification has been amended to its generally original condition due to the incorrect replacement of the term "binding agent" for --binding region-- made in applicant's response of April 30, 2001. Claims 2 and 11 which previously recited the substantially equal refractive indexes have been cancelled. Claims 1, 3-10 and 12-16 remain in this application and stand for examination. Reconsideration and reexamination are requested in view of the foregoing amendments and the comments made hereinafter.

The term "binding agent" has been replaced with the term --binding region-- (i.e., as in original) in view of the Examiner's comments and in view that the replacement of the term "binding region" was not entirely correct.

The term "binding region" is not a spatial area but refers to a chemical range or condition in which a chemical reaction progresses. The phrase "...cross-link in a binding region where cross-linking density is low" may therefore be read as "...cross-link is a binding condition in which cross-linking density becomes low".

A principal feature of the invention lies in the fact that the refractive index of the gel is substantially equal to the refractive index of the cores of optical fibers which are to be connected and that the gel closely adheres to the optical fibers. By today's amendments to claims 1, 7 and 10, these features have now been recited in the generic claims.

For achieving low cross-linking-density, a silicone gel is used in which the refractive index is adjusted by adding a small amount of a cross-linking agent which causes an addition reaction such as is described at page 12, line 4 of the specification. This reaction condition achieves the "...binding region where cross-linking density is low". By making the cross-linking-density low, the gel has a viscosity and a minimum fluidity as described in the last paragraph of page 7 of he